Please substitute the paragraph beginning at page 83, line 20. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

-- In the embodiment described above, optical elements being bonded by a hydrogen bond may be placed in a closed casing filled with a nitrogen gas ambience, and a pressurizing treatment may be made to it. This is effective to increase the bonding strength. --

IN THE CLAIMS:

Please CANCEL claims 1-17 without prejudice to or disclaimer of their subject matter.

Please ADD new claims 18- 37 as follows:

-- 18. An optical system comprising:

a diffractive optical element, which is able to be deformed by weight thereof; and

at least one optical member for preventing a change in optical performance of said optical system due to deformation of said diffractive optical element when said diffractive optical element is provided in said optical system.

19. An optical system according to claim 18, wherein said at least one optical member has at least one aspherical surface.

20. An optical system, comprising:

a diffractive optical element, which is able to be deformed by fixing said diffractive optical element in said optical system; and

at least one optical member for preventing a change in optical performance of said optical system due to deformation of said diffractive optical element when said diffractive optical element is provided in said optical system.

A97 cont'd.

21. An optical system according to claim 20, wherein said at least one optical member has at least one aspherical surface.

22. An optical instrument comprising:

an optical system having (i) a diffractive optical element being able to be deformed by weight thereof, and (ii) at least one optical member for preventing a change in optical performance of said optical system due to deformation of said diffractive optical element when said diffractive optical element is provided in said optical system; and

means for holding said optical system in said optical instrument.

23. A projection exposure apparatus comprising:

an illumination system for illuminating a pattern formed on a mask; and

a projection optical system for projecting the pattern of the mask onto a wafer, said projection optical system including (i) a diffractive optical element being able to be deformed by

weight thereof, and (ii) at least one optical member for preventing a change in optical performance of said optical system due to deformation of said diffractive optical element when said diffractive optical element is provided in said optical system.

24. A device manufacturing method including a process for transferring, through projection exposure, a pattern of a mask onto a wafer by use of a projection exposure apparatus as recited in claim 23.

A37 Cont'd.

25. An optical instrument comprising:

an optical system having (i) a diffractive optical element being able to be deformed by fixing said diffractive optical element in said optical system, and (ii) at least one optical member for preventing a change in optical performance of said optical system due to deformation of said diffractive optical element when said diffractive optical element is provided in said optical system; and

means for holding said optical system in said optical instrument.

26. A projection exposure apparatus comprising:

an illumination system for illuminating a pattern formed on a mask; and

a projection optical system for projecting the pattern of the mask onto a wafer, said projection optical system including (i) a diffractive optical element being able to be deformed by fixing said diffractive optical element in said optical system, and (ii) at least one optical member

for preventing a change in optical performance of said optical system due to deformation of said diffractive optical element when said diffractive optical element is provided in said optical system.

27. A device manufacturing method including a process for transferring, through projection exposure, a pattern of a mask onto a wafer by use of a projection exposure apparatus as recited in claim 26.

A37 cont'd.

28. An optical system comprising:

an optical element, which is able to be deformed by weight thereof; and

Sub B1

at least one optical member for preventing a change in optical performance of said optical system due to deformation of said optical element when said optical element is provided in said optical system.

29. An optical system according to claim 28, wherein said at least one optical member has at least one aspherical surface.

30. An optical system comprising:

an optical element, which is able to be deformed by fixing said optical element in said optical system; and

at least one optical member for preventing a change in optical performance of said optical system due to deformation of said optical element when said optical element is provided in said optical system.

31. An optical system according to claim 30, wherein said at least one optical member has at least one aspherical surface.

A37 cont'd.

32. An optical instrument comprising:

an optical system having (i) an optical element being able to be deformed by weight thereof, and (ii) at least one optical member for preventing a change in optical performance of said optical system due to deformation of said optical element when said optical element is provided in said optical system; and

means for holding said optical system in said optical instrument.

33. A projection exposure apparatus comprising:

an illumination optical system for illuminating a pattern formed on a mask; and

Sub B2

a projection optical system for projecting the pattern of the mask onto a wafer, said projection optical system including (i) an optical element being able to be deformed by weight thereof, and (ii) at least one optical member for preventing a change in optical performance of said optical system due to deformation of said optical element when said optical element is provided in said optical system.

34. A device manufacturing method including a process for transferring, through projection exposure, a pattern of a mask onto a wafer by use of a projection exposure apparatus as recited in claim 33.

35. An optical instrument comprising:

an optical system having (i) an optical element being able to be deformed by fixing said optical element in said optical system, and (ii) at least one optical member for preventing a change in optical performance of said optical system due to deformation of said optical element when said optical element is provided in said optical system; and

means for holding said optical system in said optical instrument.

A37 cont.

36. A projection exposure apparatus comprising:

an illumination optical system for illuminating a pattern formed on a mask; and

a projection optical system for projecting that pattern of the mask onto a wafer, said projection optical system including (i) an optical element being able to be deformed by fixing said optical element in said optical system, and (ii) at least one optical member for preventing a change in optical performance of said optical system due to deformation of said optical element when said optical element is provided in said optical system.